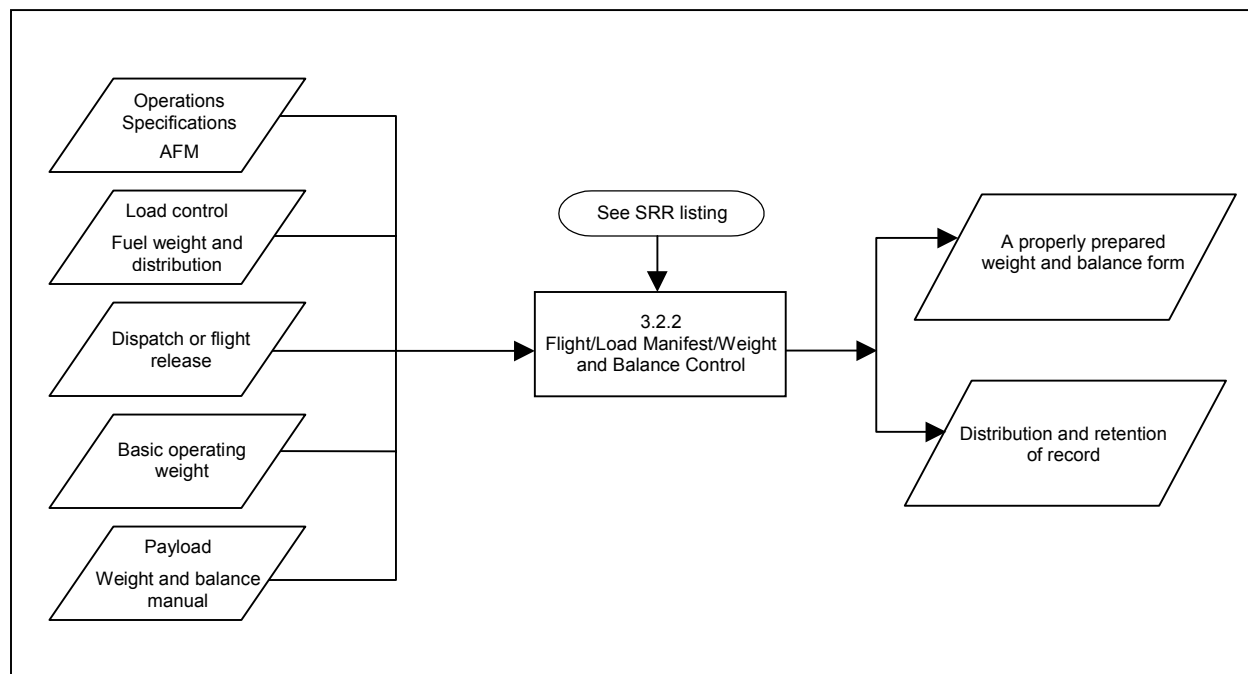


Safety Attribute Inspection (SAI) Job Aid



ELEMENT SUMMARY INFORMATION

Element: 3.2.2 Flight/Load Manifest/Weight and Balance Control

Purpose of this Element (Air Carrier's responsibility): To operate the aircraft safely within the Weight and Balance Limitations of the Aircraft Flight Manual.

Objective (FAA responsibility): To determine if the Air Carrier adheres to its approved Weight and Balance program.

Inputs:

- Operations Specifications
- AFM
- Load Control
- Fuel Weight and Distribution
- Dispatch or Flight Release
- Basic Operating Weight
- Payload
- Weight and Balance Manual

Outputs:

- A Properly Prepared Weight and Balance Form
- Distribution and Retention of Record

Safety Attribute Inspection (SAI) Job Aid

Performance Measures:

- The weight and balance was computed within limits and accurately shown on the form.
- The aircraft was loaded within weight and balance limits.
- The aircraft met the computed performance standards.
- The weight and balance form was distributed to the proper department(s).
- Records were retained for 3 months.

Safety Attribute Inspection (SAI) Job Aid

SRR:

- 121.665, Load manifest.
- 121.693 (a-e), Load manifest: All certificate holders.
- 121.695 (a, b), Disposition of load manifest, dispatch release, and flight plans: Domestic and flag operations.
- 121.697 (a-e), Disposition of load manifest, flight release, and flight plans: Supplemental operations.
- 121.198 (c) Cargo service airplanes: Increased zero fuel and landing weights.

Other CFRs and/or FAA Guidance:

- FAA Order 8300.10, Volume 2, Chapter 74, Evaluate CFR Parts 121 And 135 (10 Or More And Turbine Powered Aircraft) Operator's Weight And Balance Control Program.
- FAA Order 8300.10, Volume 2, Chapter 84, Section 2, CFR Part 121 Operations Specifications Paragraph 9: Future Activities.
- FAA Order 8300.10, Appendix 6, National Aviation Safety Inspection Program (NASIP) Check List.
- FAA Order 8400.10, Volume 3, Chapter 6, Section 2, Paragraph 1189. Load Manifests.
- FAA Order 8400.10, Volume 6, Chapter 2, Section 5, Paragraph 183. Part 121 Operator Trip Records Requirements.
- FAA Order 8400.10, Volume 6, Chapter 2, Section 5, Paragraph 187. Trip Records Inspection Areas.
- FAA Order 8400.10, Volume 6, Chapter 2, Section 5, Paragraph 189. General Inspection Practices and Procedures.
- FAA Order 8400.10, Volume 6, Chapter 2, Section 5, Paragraph 191. Specific Inspection Practices and Procedures.
- FAA Order 8400.10, Volume 3, Chapter 15, Section 3, Paragraph 2133. Weight and Balance Procedures.
- HBAW 95-15, Adherence to Advisory Circular 120-27C, "Aircraft Weight and Balance Control".
- HBAW 95-14, Adherence to Advisory Circular 120-27C, "Aircraft Weight and Balance Control".
- HBAW 97-12 and HBAW 97-12 - Special Emphasis Surveillance of Part 121 Air Carrier Cargo Loading Procedures
- FSAT 98-04 - Emphasis on Load Manifest
- Refer to appropriate Advisory Circulars

Safety Attribute Inspection (SAI) Job Aid

SRR SPECIFIC INFORMATION

SRR	Intent	Inspectors
121.665	To specify the requirements for preparation of the load manifest form.	<i>Certification: Operations</i> <i>Surveillance: Operations</i>
121.693 (a-e)	To specify contents of the load manifest.	<i>Certification: Operations</i> <i>Surveillance: Operations</i>
121.695 (a, b)	To specify the disposition of load manifests, dispatch releases, and flight plans for domestic operations.	<i>Certification: Operations</i> <i>Surveillance: Operations</i>
121.697 (a-e)	To specify the disposition of load manifests, flight releases, and flight plans for supplemental operations.	<i>Certification: Operations</i> <i>Surveillance: Operations</i>
121.198 (c)	TBD	<i>Certification: Operations</i> <i>Surveillance: Operations</i>

Safety Attribute Inspection (SAI) Job Aid

3.2.2 Flight/Load Manifest/Weight and Balance Control

SECTION 1 - RESPONSIBILITY ATTRIBUTE

Objective: To determine if there is a clearly identifiable, qualified, and knowledgeable person who is accountable for the quality of the Flight/Load Manifest/Weight and Balance Control process.

To meet this objective, the inspector will accomplish the following tasks:

1. Identify the person who is responsible for the quality of the Flight/Load Manifest/Weight and Balance Control process.
2. Review the description in the Manual that delineates the duties and responsibilities of the person.
3. Evaluate the person's qualifications and work experience (or resume', if appropriate).
4. Review the appropriate organizational chart.
5. Discuss the Flight/Load Manifest/Weight and Balance Control process with the person.

To meet this objective, the inspector will determine and record answers to the following questions:

1. Is there a clearly identifiable person who is answerable for the quality of the Flight/Load Manifest/Weight and Balance Control process?	<input type="checkbox"/> YES If yes, provide the name: <input type="checkbox"/> NO If no, explain:
2. Does the person understand the procedures associated with the Flight/Load Manifest/Weight and Balance Control process?	<input type="checkbox"/> YES If no, explain: <input type="checkbox"/> NO
3. Does the person understand the controls associated with the Flight/Load Manifest/Weight and Balance Control process?	<input type="checkbox"/> YES If no, explain: <input type="checkbox"/> NO
4. Does the person understand the interfaces associated with the Flight/Load Manifest/Weight and Balance Control process?	<input type="checkbox"/> YES If no, explain: <input type="checkbox"/> NO
5. Does the person understand the process measurements associated with the Flight/Load Manifest/Weight and Balance Control process?	<input type="checkbox"/> YES If no, explain: <input type="checkbox"/> NO
6. Is the responsibility of this position clearly documented in the air carrier's Manual(s)?	<input type="checkbox"/> YES If no, explain: <input type="checkbox"/> NO
7. Are the qualification standards for this position clearly documented?	<input type="checkbox"/> YES If no, explain: <input type="checkbox"/> NO
7a Are the qualification standards for this position appropriate for the duties that are assigned?	<input type="checkbox"/> YES If no, explain: <input type="checkbox"/> NO
8. Does the person meet the qualification standards?	<input type="checkbox"/> YES If no, explain: <input type="checkbox"/> NO
9. Does the person acknowledge that he/she has responsibility for the Flight/Load Manifest/Weight and Balance Control process?	<input type="checkbox"/> YES If no, explain: <input type="checkbox"/> NO
10. Does the person know who has authority to establish and modify the Flight/Load Manifest/Weight and Balance Control process?	<input type="checkbox"/> YES If no, explain: <input type="checkbox"/> NO

Safety Attribute Inspection (SAI) Job Aid

3.2.2 Flight/Load Manifest/Weight and Balance Control

SECTION 2 – AUTHORITY ATTRIBUTE

Objective: To determine if there is a clearly identifiable, qualified, and knowledgeable person with the authority to establish and modify the Flight/Load Manifest/Weight and Balance Control process.

To meet this objective, the inspector will accomplish the following tasks:

1. Identify the person who has the authority to establish or modify the Flight/Load Manifest/Weight and Balance Control process.
2. Review the description in the Manual that delineates the duties and responsibilities of the person.
3. Evaluate the person's qualifications and work experience (or resume', if appropriate).
4. Review the appropriate organizational chart.
5. Discuss the Flight/Load Manifest/Weight and Balance Control process with the person.

To meet this objective, the inspector will determine and record answers to the following questions:

1. Is there a clearly identifiable person who has authority to establish and modify the air carrier's policies for the Flight/Load Manifest/Weight and Balance Control process?	<input type="checkbox"/> YES If yes, provide the name: <input type="checkbox"/> NO If no, explain:
2. Does the person understand the procedures associated with the Flight/Load Manifest/Weight and Balance Control process?	<input type="checkbox"/> YES If no, explain: <input type="checkbox"/> NO
3. Does the person understand the controls associated with the Flight/Load Manifest/Weight and Balance Control process?	<input type="checkbox"/> YES If no, explain: <input type="checkbox"/> NO
4. Does the person understand the interfaces associated with the Flight/Load Manifest/Weight and Balance Control process?	<input type="checkbox"/> YES If no, explain: <input type="checkbox"/> NO
5. Does the person understand the process measurements associated with the Flight/Load Manifest/Weight and Balance Control process?	<input type="checkbox"/> YES If no, explain: <input type="checkbox"/> NO
6. Is the authority of this position clearly documented in the air carrier's Manual(s)?	<input type="checkbox"/> YES If no, explain: <input type="checkbox"/> NO
7. Are the qualification standards for this position clearly documented?	<input type="checkbox"/> YES If no, explain: <input type="checkbox"/> NO
7a Are the qualification standards for this position appropriate for the duties that are assigned?	<input type="checkbox"/> YES If no, explain: <input type="checkbox"/> NO
8. Does the person meet the qualification standards?	<input type="checkbox"/> YES If no, explain: <input type="checkbox"/> NO
9. Does the person acknowledge that he/she has authority for the Flight/Load Manifest/Weight and Balance Control process?	<input type="checkbox"/> YES If no, explain: <input type="checkbox"/> NO
10. Does the individual know who has the responsibility for the Flight/Load Manifest/Weight and Balance Control process?	<input type="checkbox"/> YES If no, explain: <input type="checkbox"/> NO
11. Are the procedures for delegation of authority clearly documented for the Flight/Load Manifest/Weight and Balance Control process?	<input type="checkbox"/> YES If no, explain: <input type="checkbox"/> NO

Safety Attribute Inspection (SAI) Job Aid

3.2.2 Flight/Load Manifest/Weight and Balance Control

SECTION 3 – PROCEDURES ATTRIBUTE

Objective: To determine if the air carrier has documented procedures for accomplishing the Flight/Load Manifest/Weight and Balance Control process.

To meet this objective, the inspector will accomplish the following tasks:

1. Review the documented instructions and information related to the Flight/Load Manifest/Weight and Balance Control process to ensure that they contain who, what, where, when, and how.
2. Review the FAA Guidance and Specific Regulatory Requirements (SRR) included in the supplemental information section of this SAI.
3. Discuss the Flight/Load Manifest/Weight and Balance Control process with appropriate personnel to gain an understanding of the procedures.
4. Observe the Flight/Load Manifest/Weight and Balance Control process to gain an understanding of the procedures.

To meet this objective, the inspector will determine and record answers to the following questions:

1. Do written procedures exist to achieve the desired result of the Flight/Load Manifest/Weight and Balance Control process:

1.1 Do written procedures exist for collecting information needed to complete the weight and balance form?

☐ YES **If no or N/A, explain:**
☐ NO
☐ N/A

1.2 Do written procedures exist for the performance of the following steps in producing the weight and balance form: [121.695 (a, b), 121.697 (a-e)]

1.2.1 Calculate the weight and balance; [SRR 121.693 (c)]

☐ YES **If no or N/A, explain:**
☐ NO
☐ N/A

1.2.2 Produce the weight and balance form;

☐ YES **If no or N/A, explain:**
☐ NO
☐ N/A

1.2.3 Distribute the record; and [SRR 121.695 (a), 121.697 (a-d)]

☐ YES **If no or N/A, explain:**
☐ NO
☐ N/A

1.2.4 Retain the record? [SRR 121.695 (b)]

☐ YES **If no or N/A, explain:**
☐ NO
☐ N/A

1.3 Do written procedures exist requiring the following items to be accurately displayed on the weight and balance form: [121.693 (a-e)]

1.3.1 Weight of aircraft, fuel, and payload; [SRR 121.693 (a)]

☐ YES **If no or N/A, explain:**
☐ NO
☐ N/A

1.3.2 Maximum allowable weight for compliance with performance limitations; [SRR 121.693 (b)]

☐ YES **If no or N/A, explain:**
☐ NO
☐ N/A

Safety Attribute Inspection (SAI) Job Aid

3.2.2 Flight/Load Manifest/Weight and Balance Control

SECTION 3 – PROCEDURES ATTRIBUTE

1.3.3 Actual take-off weight; and [SRR 121.693 (a)]	<input type="checkbox"/> YES If no or N/A, explain: <input type="checkbox"/> NO <input type="checkbox"/> N/A
1.3.4 Evidence that the aircraft is loaded within weight and balance limitations? [SRR 121.693 (d)]	<input type="checkbox"/> YES If no or N/A, explain: <input type="checkbox"/> NO <input type="checkbox"/> N/A
1.4 Do written procedures exist for adjusting weight and balance forms after they have been completed?	<input type="checkbox"/> YES If no or N/A, explain: <input type="checkbox"/> NO <input type="checkbox"/> N/A
2. Do the procedures identify: who, what, where, when and how?	<input type="checkbox"/> YES If no, explain: <input type="checkbox"/> NO
3. Are the procedures in compliance with the CFR(s)?	<input type="checkbox"/> YES If no, explain: <input type="checkbox"/> NO
4. Do the procedures conform to other written guidance (E.g., Operations Specifications, FAA Orders, Airworthiness Directives, Advisory Circulars, Handbook Bulletins, Directives, and Manufacturer's Recommendations)?	<input type="checkbox"/> YES If no, explain: <input type="checkbox"/> NO
5. Does the air carrier have the resources to support the written procedures for the Flight/Load Manifest/Weight and Balance Control process?	<input type="checkbox"/> YES If no, explain: <input type="checkbox"/> NO
6. If alternate procedures exist for use during irregular conditions, do they achieve the same desired results as the primary procedures so that an equivalent level of safety is maintained? (E.g., a manual system used as a result of equipment failure).	<input type="checkbox"/> YES If no, explain: <input type="checkbox"/> NO <input type="checkbox"/> N/A, No alternate procedures exist for this element
7. Are the procedures published in different manuals relating to the Flight/Load Manifest/Weight and Balance Control process consistent?	<input type="checkbox"/> YES If no, explain: <input type="checkbox"/> NO
8. Does the air carrier have a documented method for assessing the impacts of procedural changes to the Flight/Load Manifest/Weight and Balance Control process?	<input type="checkbox"/> YES If no, explain: <input type="checkbox"/> NO

Safety Attribute Inspection (SAI) Job Aid

3.2.2 Flight/Load Manifest/Weight and Balance Control

SECTION 4 – CONTROL ATTRIBUTE

Objective: To determine if checks and restraints are designed into the Flight/Load Manifest/Weight and Balance Control process to ensure a desired result is achieved.

To meet this objective, the inspector will accomplish the following tasks:

1. Review the documented instructions and information related to the Flight/Load Manifest/Weight and Balance Control process.
2. Review the FAA Guidance and Specific Regulatory Requirements (SRR) included in the supplemental information section of this SAI
3. Discuss the Flight/Load Manifest/Weight and Balance Control process with appropriate personnel to gain an understanding of the controls.
4. Observe the Flight/Load Manifest/Weight and Balance Control process to gain an understanding of the controls.

To meet this objective, the inspector will determine and record answers to the following questions:

1. Are the following checks and restraints built into the Flight/Load Manifest/Weight and Balance Control process:

1.1 Does the air carrier have pertinent data concerning all credible weight and balance scenarios for the airplane?

☐ YES If no or N/A, explain:
☐ NO
☐ N/A

1.2 Does the air carrier verify the accuracy of the weight and balance calculations prior to the flight? [SRR 121.665]

☐ YES If no or N/A, explain:
☐ NO
☐ N/A

1.3 Does the air carrier use weight and balance forms specific to the make, model, and series of the aircraft using fleet weights?

☐ YES If no or N/A, explain:
☐ NO
☐ N/A

1.4 Does the air carrier have approved weight and balance procedures? (121.665)

☐ YES If no or N/A, explain:
☐ NO
☐ N/A

1.5 Does the air carrier use weight and balance forms specific to the serial numbers of the aircraft using individual weights?

☐ YES If no or N/A, explain:
☐ NO
☐ N/A

2. Do the checks and restraints ensure the desired result is achieved for the Flight/Load Manifest/Weight and Balance Control process?

☐ YES If no, explain:
☐ NO

3. Does the air carrier have a documented method for assessing the impacts of any changes made to checks and restraints in the Flight/Load Manifest/Weight and Balance Control process?

☐ YES If no, explain:
☐ NO

4. Does the air carrier have the resources to support the checks and restraints for the Flight/Load Manifest/Weight and Balance Control process?

☐ YES If no, explain:
☐ NO

Safety Attribute Inspection (SAI) Job Aid

3.2.2 Flight/Load Manifest/Weight and Balance Control

SECTION 5 - PROCESS MEASUREMENT ATTRIBUTE

Objective: To determine if the air carrier measures and assesses the Flight/Load Manifest/Weight and Balance Control process, to identify and correct problems or potential problems.

To meet this objective, the inspector will accomplish the following tasks:

1. Review the documented instructions and information related to the Flight/Load Manifest/Weight and Balance Control process.
2. Discuss the Flight/Load Manifest/Weight and Balance Control process with appropriate personnel to gain an understanding of the process measures.
3. Observe the Flight/Load Manifest/Weight and Balance Control process to gain an understanding of the process measures.

To meet this objective, the inspector will determine and record answers to the following questions:

1. <Deleted>

2. Does the air carrier's Flight/Load Manifest/Weight and Balance Control process include the following process measurements?

2.1 Does the air carrier conduct a review of weight and balance records for accuracy and completeness?

☐ YES If no or N/A, explain:
☐ NO
☐ N/A

2.2 Does the air carrier analyze any errors that were detected?

☐ YES If no or N/A, explain:
☐ NO
☐ N/A

2.3 Does the air carrier provide and document feedback when errors are detected?

☐ YES If no or N/A, explain:
☐ NO
☐ N/A

2.4 Does the air carrier use the results of their analysis to correct undesirable trends?

☐ YES If no or N/A, explain:
☐ NO
☐ N/A

3. Does the air carrier document their process measurement methods and results?

☐ YES If no, explain:
☐ NO

4. Are the air carrier's process measurement methods effective?

☐ YES If no, explain:
☐ NO

5. Does the air carrier use their process measurement results to improve their programs?

☐ YES If no, explain:
☐ NO

6. Are the process measurement results accessible to the FAA?

☐ YES If no, explain:
☐ NO

7. Does the organization that conducts the process measurement have direct access to the person with responsibility for the Flight/Load Manifest/Weight and Balance Control process?

☐ YES If no, explain:
☐ NO

8. Does the air carrier have the resources to support the process measurement for the Flight/Load Manifest/Weight and Balance Control process?

☐ YES If no, explain:
☐ NO

Safety Attribute Inspection (SAI) Job Aid

3.2.2 Flight/Load Manifest/Weight and Balance Control

SECTION 6 – INTERFACES ATTRIBUTE

Objective: To determine if the air carrier identifies and manages the interactions between the Flight/Load Manifest/Weight and Balance Control process and the other element processes within the air carrier organization.

To meet this objective, the inspector will accomplish the following tasks:

1. Review the documented instructions and information related to the Flight/Load Manifest/Weight and Balance Control process.
2. Discuss the Flight/Load Manifest/Weight and Balance Control process with appropriate personnel to gain an understanding of the interfaces.
3. Observe the Flight/Load Manifest/Weight and Balance Control process to gain an understanding of the interfaces.

To meet this objective, the inspector will determine and record answers to the following questions:

1. Are the following interfaces identified for the Flight/Load Manifest/Weight and Balance Control process:

1.1 Fueling (Element 1.3.16)	<input type="checkbox"/> YES If no or N/A, explain: <input type="checkbox"/> No <input type="checkbox"/> N/A
1.2 Weight and Balance Program (Element 1.3.17)	<input type="checkbox"/> YES If no or N/A, explain: <input type="checkbox"/> No <input type="checkbox"/> N/A
1.3 Carry-On Baggage (Element 3.1.5)	<input type="checkbox"/> YES If no or N/A, explain: <input type="checkbox"/> No <input type="checkbox"/> N/A
1.4 Carriage of Cargo (Element 3.1.8)	<input type="checkbox"/> YES If no or N/A, explain: <input type="checkbox"/> No <input type="checkbox"/> N/A
1.5 Safety Program (Element 7.2.1)	<input type="checkbox"/> YES If no or N/A, explain: <input type="checkbox"/> No <input type="checkbox"/> N/A
1.6 Manual Currency (Element 2.1.1)	<input type="checkbox"/> YES If no or N/A, explain: <input type="checkbox"/> No <input type="checkbox"/> N/A
1.7 Content Consistency Across Manuals (Element 2.1.2)	<input type="checkbox"/> YES If no or N/A, explain: <input type="checkbox"/> No <input type="checkbox"/> N/A
1.8 (Manual) Distribution (Element 2.1.3)	<input type="checkbox"/> YES If no or N/A, explain: <input type="checkbox"/> No <input type="checkbox"/> N/A
1.9 (Manual) Availability (Element 2.1.4)	<input type="checkbox"/> YES If no or N/A, explain: <input type="checkbox"/> No <input type="checkbox"/> N/A

Safety Attribute Inspection (SAI) Job Aid

3.2.2 Flight/Load Manifest/Weight and Balance Control

SECTION 6 – INTERFACES ATTRIBUTE

2. List any additional interfaces identified:

3. Are there written procedures for the use of air carrier personnel in the application of these interfaces?	<input type="checkbox"/> YES If no, explain: <input type="checkbox"/> NO
--	--

4. Are there controls to ensure that interfaces occur?	<input type="checkbox"/> YES If no, explain: <input type="checkbox"/> NO
--	--

5. Are the interfaces between the Flight/Load Manifest/Weight and Balance Control process and other processes treated consistently in the Manual(s)?	<input type="checkbox"/> YES If no, explain: <input type="checkbox"/> NO
--	--